

ROOS et al  
Appl. No. 09/732,879  
March 23, 2005

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-19 (Canceled).

20. (Currently Amended) A method in a telecommunication system for providing access to telecommunication services to subscribers at user terminals, each of which being separately connected to at least one access point, via a net terminal including xDSL modems, and a communication network, the at least one access point ~~comprising~~ including xDSL modems with filters, comprising:

transmitting a signal from an in-band modem of the net terminal including a user terminal identity to a controller;

in response, the controller searching for an available connection path for the net terminal at an access point;

creating, by the controller, a bi-directional broadband data transmission path between the user terminal and the at least one access point using the in-band modem connection of the net terminal for initial installation of the broadband data transmission path; and

activating, by the controller, the transmission path between the user terminal and the at least one access point.

21. (Currently Amended) Apparatus for use in a telecommunication system for providing access to telecommunication services to subscribers, comprising:

plural subscriber user terminals;

plural net terminals, each user terminal being coupled to one of the net terminals, and each net terminal including an in-band modem and a first xDSL modem;

ROOS et al  
Appl. No. 09/732,879  
March 23, 2005

a first access point coupled to plural ones of the net terminals and including a pool of second xDSL modems;

a controller coupled to the access point and configured to control the first xDSL modems and the second xDSL modems to establish a bi-directional broadband connection between one of the user terminals and the access point,

wherein prior to establishment of the bi-directional broadband connection, the in-band modem in the net terminal associated with the one user terminal is configured to establish a preliminary communication with the controller to engage the controller to initialize one of the second xDSL modems for the bi-directional broadband connection.

22. (Previously Presented) An apparatus in a telecommunication system according to claim 21, wherein the in-band modem and the first xDSL modem are configured to operate independently and in parallel in the net terminal.

23. (Previously Presented) An apparatus in a telecommunication system according to claim 21, where an input signal to one of the second xDSL modems is a signal output from one of a pool of xDSL filters.

24. (Previously Presented) An apparatus in a telecommunication system according to claims 21, wherein the pool of xDSL filters is located in the first access point.

25. (Previously Presented) An apparatus in a telecommunication system according to claims 21, wherein the pool of xDSL filters is located in a second access point coupled between the first access point and the controller.

26. (Previously Presented) An apparatus in a telecommunication system according to claim 21, further comprising:

ROOS et al  
Appl. No. 09/732,879  
March 23, 2005

a management system for processing retrieved user information so that the controller can adapt the established connection the retrieved user information.

27. (Previously Presented) An apparatus in a telecommunication system according to claim 21, wherein the controller is configured to retrieve subscriber information to individualize the established connection.

28. (Previously Presented) A method for use in a telecommunication system for providing access to telecommunication services to subscribers at user terminals, each user terminal being coupled to one of plural net terminals, and each net terminal including an in-band modem and a first xDSL modem, and each net terminal being coupled to a first access point that includes a pool of second xDSL modems, comprising:

detecting a need to establish a bi-directional broadband connection between one of the user terminals and the access point;

establishing an initial communication from the in-band modem of the net terminal associated with the one user terminal and a controller to initialize one of the second xDSL modems for the bi-directional broadband connection;

in response to the initial communication, the controller configuring the first xDSL modem and one of the second xDSL modems to establish the bi-directional broadband connection between the user terminal and the first access point.

29. (Previously Presented) The method in claim 28, wherein an input signal to the one second xDSL modem is a signal output from one of a pool of xDSL filters.

30. (Previously Presented) The method in claim 28, wherein establishing the initial communication further comprises:

transmitting a signal from the in-band modem that includes a user terminal identity.

ROOS et al  
Appl. No. 09/732,879  
March 23, 2005

31. (Previously Presented) The method in claim 28, wherein after establishing the initial communication, the controller searches for an available connection path for the net terminal through the access point.

32. (Previously Presented) The method in claim 28, further comprising:

activating the bi-directional broadband connection between the user terminal and the access point.

33. (Previously Presented) The method in claim 28, further comprising using the method in claim 28 to establish multiple bi-directional broadband connections with multiple user terminals.

34. (Previously Presented) The method in claim 28, further comprising using the method in claim 28 to establish simultaneously multiple bi-directional broadband connections with multiple user terminals.